

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-13. (Cancelled)

14. (Previously Presented) A method for measuring a flexing of a component of a wind power plant, comprising:

positioning a conductor within a component of a wind power plant such that a length of the conductor changes during a flexing of the component;

generating a pulse signal at a first end of the conductor;

receiving the pulse signal via the conductor at a second end of the conductor;

generating an additional pulse signal at the first end of the conductor based at least in part upon reception of the pulse signal;

measuring a number of pulse signals generated within a unit of time;

comparing the measured number of pulse signals with a stored table; and

determining the flexing of the component based at least in part on the comparison.

15. (Previously Presented) An apparatus for measuring a change in a length of a component of a wind power plant, comprising:

a conductor positioned within a component of a wind power plant such that a length of the conductor changes with a change in a length of the component;

a signal generator coupled to a first end of the conductor and configured to generate a pulse signal thereon;

a reflector coupled to a second end of the conductor and configured to reflect the pulse signal back to the first end of the conductor; and

a signal receiver coupled to the first end of the conductor and to the signal generator, the signal receiver configured to receive the reflected pulse signal and to cause the

signal generator to generate an additional pulse signal based at least in part upon reception of the reflected pulse signal, a time between the reception of the reflected pulse signal and the generation of the additional pulse signal being substantially constant.

16. (Previously Presented) The method of claim 14, wherein the conductor comprises at least one of an electrical conductor or an optical fiber cable.

17. (Previously Presented) The apparatus of claim 15, wherein the conductor is connected in a positively locking relationship to the component at least at the first end and the second end of the conductor.

18. (Previously Presented) The apparatus of claim 15, wherein the conductor is connected to the component in a positively locking relationship at least in a given region, and, upon the change in the length of the component, the length of the conductor changes only in said given region.

19. (Cancelled)

20. (Previously Presented) An apparatus for measuring distortion of a blade, comprising:

a blade comprising a first end and a blade tip, wherein the first end and the blade tip are located at opposite ends of a length of the blade;

a conductor extending longitudinally from adjacent the first end of the blade a predetermined distance along the length of the blade toward the blade tip and back to adjacent the first end of the blade, the conductor being coupled to a structure of the blade; and

a detector coupled to the conductor and configured to detect changes in a length of the conductor.

21. Cancelled

22. (Previously Presented) The apparatus of claim 20, wherein the blade comprises a rotor blade of a wind power plant, and the first end of the blade is connected to a hub.

23. (Previously Presented) An apparatus for measuring distortion of a blade, comprising:

a blade comprising a first end and a blade tip, wherein the first end and the blade tip are located at opposite ends of a length of the blade;

a conductor extending longitudinally from the first end of the blade a predetermined distance along the length of the blade toward the blade tip, the conductor being coupled to a structure of the blade and helically surrounding the blade; and

a detector coupled to the conductor and configured to detect changes in a length of the conductor.

24. (Previously Presented) The apparatus of claim 20, wherein the conductor is selected from a group consisting of an electrical conductor, an acoustic conductor, and an optical conductor.

25. (Previously Presented) The apparatus of claim 24, wherein the electrical conductor contains a percentage of aluminum.

26. (Previously Presented) The apparatus of claim 20, further comprising additional conductors extending longitudinally from adjacent the first end toward the blade tip.

27. (Previously Presented) The apparatus of claim 26, wherein at least one of the additional conductors extends along a first face of the blade and at least one of the additional conductors extends along a second face of the blade, the second face being opposite the first face.

28. (Previously Presented) The apparatus of claim 26, wherein the conductor and the additional conductors are electrical conductors, and the additional conductors are galvanically connected at a plurality of predetermined lengths to the conductor, each of the predetermined lengths being shorter than the predetermined distance.

29. (Previously Presented) The apparatus of claim 26, wherein the additional conductors extend a plurality of different lengths, each of the different lengths being shorter than the length of the blade.

30. (Previously Presented) The apparatus of claim 20, wherein the conductor is releasably coupled to the blade.

31. (Previously Presented) An apparatus for measuring distortion of a blade, comprising:

a blade comprising a first end and a blade tip, wherein the first end and the blade tip are located at opposite ends of a length of the blade;

a conductor extending longitudinally from adjacent the first end of the blade a predetermined distance along the length of the blade toward the blade tip, the conductor being coupled to a structure of the blade;

a calibration conductor extending longitudinally from the first end of the blade a second predetermined distance along the length of the blade toward the blade tip, the calibration conductor coupled to the blade such that a distortion of the blade does not substantially alter a length of the calibration conductor; and

a detector coupled to the conductor and configured to detect changes in a length of the conductor.

32. (Previously Presented) The apparatus of claim 26, wherein the detector is coupled to the additional conductors and is further configured to detect changes in corresponding lengths of the additional conductors.

33. (Previously Presented) The apparatus of claim 22, further comprising an evaluation device coupled to the detector and to a control device of the wind power plant, the evaluation device configured to cause the wind power plant to shut down if detected changes in the length of the conductor exceed a predetermined value.

34. (Previously Presented) The apparatus of claim 31, wherein the length of the calibration conductor is substantially similar to the length of the conductor.

35. (Previously Presented) The apparatus of claim 31, wherein the detector is coupled to the calibration conductor and is further configured to use measurements of the calibration conductor to detect the changes in the length of the conductor.

36. (Previously Presented) A wind power plant, comprising:
a rotor having a hub;
a rotor blade coupled to the hub at a first end of the rotor blade and extending to a rotor blade tip;
a first conducting loop extending along the rotor blade from proximate the first end in a direction of the rotor blade tip and back to the first end;
a second conducting loop extending along the rotor blade from proximate the first end in a direction of the rotor blade tip and back to the first end;
a detector system coupled to the first conducting loop and the second conducting loop and configured to detect a first characteristic of the first conducting loop and a second characteristic of the second conducting loop; and
a control system coupled to the detector system and configured to control the wind power plant based at least in part on a difference between the first characteristic and the second characteristic.

37. (Previously Presented) The wind power plant of claim 36, wherein the first characteristic and the second characteristic comprise electrical resistance values of the first conducting loop and the second conducting loop, respectively.

38. (Previously Presented) The wind power plant of claim 36, wherein the first characteristic and the second characteristic comprise delay times for signals transmitted through the first conducting loop and the second conducting loop, respectively.

39. (Previously Presented) The wind power plant of claim 36, wherein the detector system comprises a first detector coupled to the first conducting loop and configured to detect the first characteristic, and a second detector coupled to the second conducting loop and configured to detect the second characteristic.

40. (Previously Presented) The wind power plant of claim 36, wherein the detector system comprises a detector coupled to both the first conducting loop and the second conducting loop and configured to detect the first characteristic and the second characteristic.

41. (Previously Presented) The wind power plant of claim 36, wherein the first conducting loop has a loop length and extends along substantially an entire length of the rotor blade such that a flexing of the rotor blade causes a change in the first characteristic, and the second conducting loop has the loop length and extends along less than the entire length of the rotor blade such that the flexing of the rotor blade does not cause a substantial change in the second characteristic.

42. (Previously Presented) The wind power plant of claim 36, wherein the difference between the first characteristic and the second characteristic is indicative of a flexing of the rotor blade.